Policy Analysis

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Zimbabwe
Why Is One of the World's Least-Free Economies Growing So Fast?

by Craig J. Richardson

Executive Summary

Between 2009 and 2011, Zimbabwe's GDP growth averaged an impressive 7.3 percent, making it one of the world's fastest-growing countries. Yet World Bank governance indicators place Zimbabwe's government among the world's worst, and the Fraser Institute's *Economic Freedom of the World* index ranks it as one of the world's least economically free countries.

Zimbabwe's performance coincides with its January 2009 adoption of the U.S. dollar and South African rand as its official currencies, which swiftly squelched rampant hyperinflation and stabilized the economy. Yet dollarization doesn't explain why the country has been growing faster than Hong Kong, a territory with a stable currency and one of the freest economies in the world.

Zimbabwe's dollarization was accompanied by three significant economic developments, none of which will foster growth long-term. First, between 2009 and 2011, two-thirds of Zimbabwe's nominal GDP growth was the result of increases in government expenditures, augmented by hundreds of millions of dollars in International Monetary Fund grants and Chinese loans. Second, rich Western countries dramatically increased their infusions of "off-budget" grants to Zimbabwe, and this foreign aid now accounts for nearly 9 percent of its GDP. Third, Zimbabwe's economy is becoming increasingly dependent on the production and export of raw mineral commodities, which have experienced rapid worldwide price hikes.

Zimbabwe's recent growth rates do not accurately reflect its long-term economic prospects. Rather, they draw attention away from the country's continuing pressing problems, including an inadequate food supply, poor governance, weakening property rights protection, and a bloated government sector. Those problems have been unwittingly enabled by Western governments and the IMF through massive cash infusions, which have given the Zimbabwean government little incentive to change.

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Since 2000, Zimbabwe has consistently earned the rank of one of the world's least economically free countries.

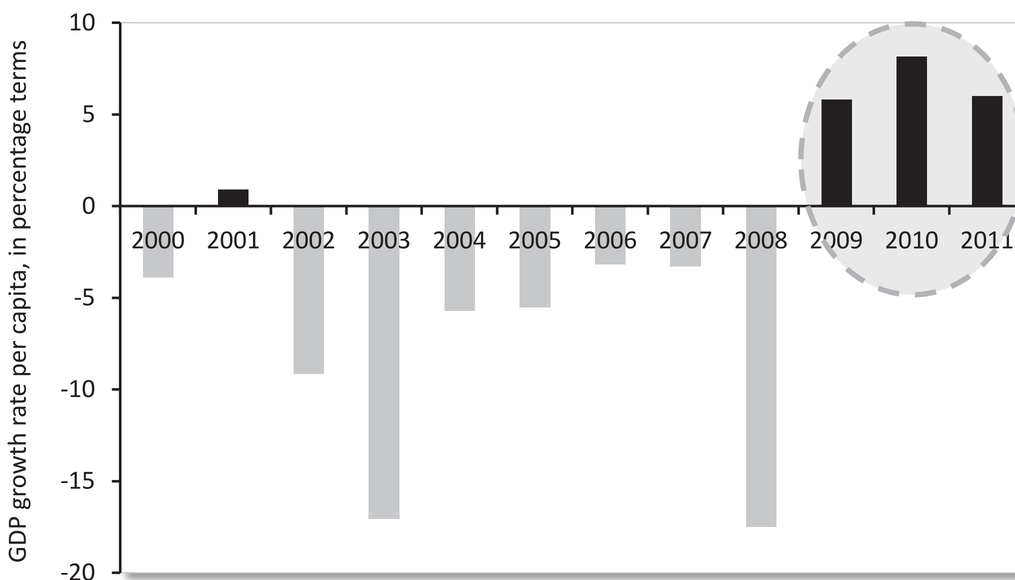
Introduction

Zimbabwe's economy has been growing faster than Hong Kong's, the traditional bastion of free-market capitalism. The African country's GDP growth between 2009 and 2011 averaged an impressive 7.3 percent, including 9.3 percent in 2011. By comparison, Hong Kong's economy grew 5 percent in 2011.[1] Given its stature as one of the world's worst business environments, Zimbabwe's rapid growth might seem a puzzling reversal after nearly a decade of economic contraction, as shown in Figure 1.

Since 2000, Zimbabwe has consistently earned the rank of one of the world's least economically free countries, according to the Canada-based Fraser Institute. In 2009, it was dead last on Fraser's list, while in 2010 it ranked 142nd out of 144 countries. The Fraser Institute says the cornerstones of economic freedom are "personal choice, voluntary exchange, freedom to compete, and security of privately owned property."[2] Among the reasons for Zimbabwe's bottom rank are its poor property rights protection, high tariffs on imports, an increasingly bloated state sector, great difficulty in starting a business, and onerous regulations regarding hiring and firing.[3] In addition, its overall average score on three World Bank governance indicators—"control of corruption," "rule of law," and "quality of governance"—has declined in recent years. In 1996 (earliest data available) it was in the 39th percentile, as shown in Figure 2. By 2010, its average rating put it at the bottom of the barrel in the 2.4th percentile.

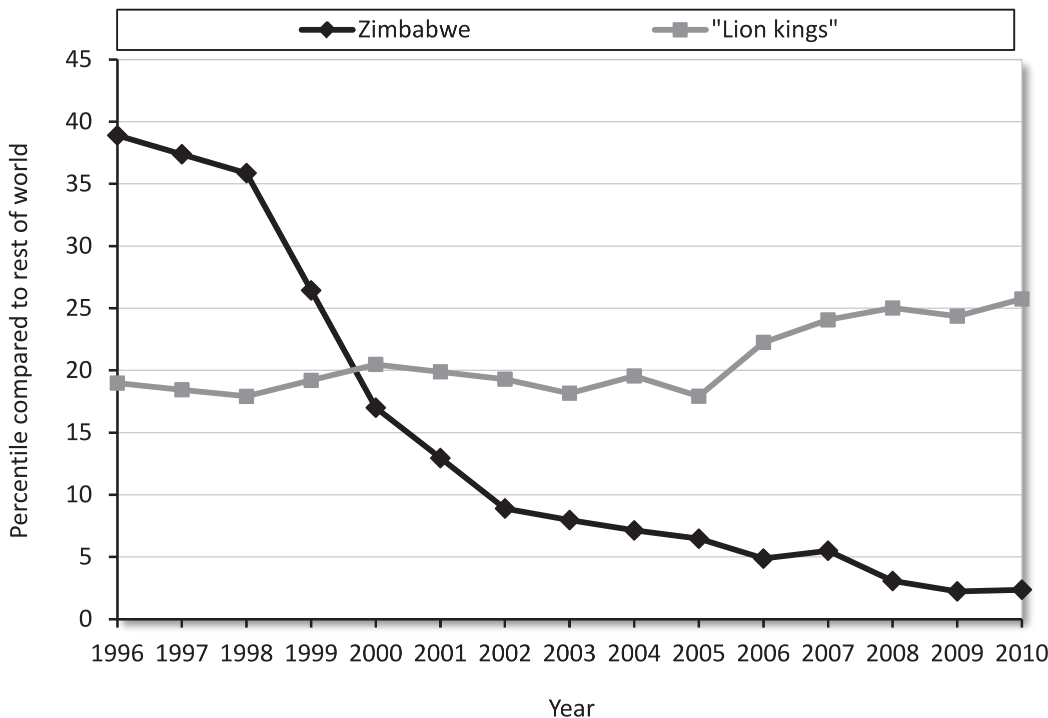
To be fair, the country *is* better off than it was four years ago. Its tourism is increasing, its education and health care systems have improved, and its markets are stocked with goods. This began with its adoption of the U.S. dollar and South African rand as Zimbabwe's official currencies (known as dollarization) in early 2009. The change replaced Zimbabwe's largely worthless currency and swiftly quelled the rampant hyperinflation of previous years.[4] Farm yields have increased as well, although they are still far below 1990s agricultural output levels and are insufficient to feed the country's population. As a result, international food-aid programs now fill the gap.

Figure 1
Zimbabwe: GDP Growth per Capita, 1990–2011



Source: World Development Indicators, The World Bank.

Figure 2
Zimbabwe vs. "Lion Kings": Trends in Selected World Bank Governance Indicators, 1996–2010



Source: World Bank Governance Indicators.
Note: The "Lion Kings" are strong performing sub-Saharan African economies, which include Angola, Chad, Ethiopia, Mozambique, Nigeria, and Rwanda. Each trend line reflects the average of three World Bank goverance indicators: control of corruption, adherence to rule of law, and quality of governance. Higher percentiles indicate better governance. Data are not available for 1997, 1999, or 2001; in those cases the average of the year prior and the the year afterward were taken.

Yet while a stable currency is a key starting point for rebuilding an economy, it doesn't explain why in recent years Zimbabwe has grown faster than Hong Kong, a territory with a stable currency and the freest economy in the world.[5] Research has shown that, in general, countries with higher levels of GDP growth are associated with higher levels of economic freedom or movements in that direction.[6] Zimbabwe is thus a curious outlier that requires further investigation.

Zimbabwe vs. "The Lion Kings"

Zimbabwe's rapid growth does put it in the recent company of some other sub-Saharan African countries. An analysis by *The Economist* finds that between 2001 and 2010, six of the world's 10 fastest-growing economies were in sub-Saharan Africa. Dubbed the "Lion Kings," these countries include Angola, Chad, Ethiopia, Mozambique, Nigeria, and Rwanda. Over that decade, their annual GDP growth averaged between 7.9 and 11.1 percent, as shown in Table 1.[7] But Table 1 also shows that by 2011 Zimbabwe was outperforming all of them.

In looking for parallels between Zimbabwe and its six African brethren, something does not quite make sense. Unlike Zimbabwe's plunge to the bottom third percentile in World Bank governance quality, the average quality of the six Lion Kings' governance is generally on the upswing, rising from the

Although dollarization stopped Zimbabwe's economic free fall, much of its growth since 2008 is based on external factors.

Table 1
Changes in Fastest Growing African Economies, 2001–2011

	Angola	Chad	Ethiopia	Mozambique	Nigeria	Rwanda	vs.	Zimbabwe
Annual average GDP growth, 2001–2010 (%)	11.1	7.9	8.4	7.9	8.9	7.6		−4.6
Annual average GDP growth, 2010–2011 (%)	3.4	3.1	7.3	7.1	6.7	8.6		9.3
Days to start a business, 2005	119	75	32	153	44	18		97
Days to start a business, 2011	68	75	9	13	31	3		90

Sources: Data used to construct the table are from "The Lion Kings?" *The Economist*, January 6, 2011, http://www.economist.com/node/17853324. The GDP information comes from the "World Development Indicators" database and the business information comes from World Bank's "Doing Business" database.

19th percentile to nearly the 26th percentile since 1996 (see Figure 2).[8] In some important ways, these other African governments have gotten more market-friendly, especially by making it easier for businesses to enter the formal sector, as measured by the World Bank's "Doing Business" database. With the exception of Chad, the Lion Kings have drastically lowered the total time it takes to formally start a business (including government registration), which is indicative of a smoother functioning bureaucracy, as shown in Table 1.[9] Entering the formal sector is hugely important, as this entitles African companies to things Westerners take for granted, such as obtaining security of property, a mailing address, the ability to advertise, potential access to bank loans, insurance, and greater legitimacy in the eyes of their customers.[10] Rwanda has lowered the time it takes to start a business to only three days; not surprisingly, it has the fastest GDP growth of the six countries.

The Zimbabwean government's expenditures have been rapidly expanding.

Table 1 shows that starting a business in Zimbabwe took 90 days, on average, in 2011, barely lower than the 97 days it took in 2005, and longer than any of the Lion King countries. That makes its stellar 9.3 percent GDP growth in 2011 even more perplexing.

Zimbabwe had previously provided important global lessons on the perils of ignoring the importance of property rights: the result was hyperinflation, which passed a billion percent, and an economy that collapsed to half its former size between 2000 and 2008.[11] For the dollarization era, Zimbabwe gives us another study in extremes: a rapidly growing but unfree economy.

If we accept that economic freedom, sound institutions, and secure property rights encourage economic growth, then Zimbabwe's growth looks aberrant. Moreover, the factors driving the country's growth must be so large as to overcome the negative domestic environment. In other words, Zimbabwe grows (for now) despite itself.

In fact, although dollarization stopped the country's economic free fall, much of its growth since 2008 is based on three external factors that have artificially propped up the economy. First, since 2008 the Zimbabwean government's expenditures have been rapidly expanding, with rising deficits that cannot be financed through government bonds or printing money. Indebtedness to foreign nations continues to rise as a result. Sec-

ond, during the same timeframe, rich Western countries have ramped up assistance, sending hundreds of millions of dollars in off-budget grants to Zimbabwe through organizations that dispense aid. Third, Zimbabwe's economy is growing increasingly cruder, relying on raw mineral commodities that have so far experienced rapid worldwide price hikes, but which result in the neglect of the country's once-sophisticated manufacturing and farming sectors.

Thus, this growth is likely to be short-lived without reforms in government and a move to a freer economy. The rapid growth in foreign aid cannot be sustained amid the severe pressures put on Organisation for Economic Co-operation and Development (OECD) countries' budgets in recent years. Raw-mineral resources, such as diamonds, eventually run out and there is little leverage to bargain with when their prices are determined internationally through supply and demand. Finally, businesses have little incentive to invest in the face of rising taxes and insecure property rights and rule of law.

Zimbabwe's coalition government, ostensibly run by Prime Minister Morgan Tsvangirai and the Movement for Democratic Change (MDC) political party, but in reality still largely controlled by long-term President Robert Mugabe of the Zimbabwe African National Union–Patriotic Front (ZANU-PF) political party, has made it likely that Zimbabwe will revert to another disastrous tailspin of financial collapse unless changes are made.

The Previous Decade and a Reality Check

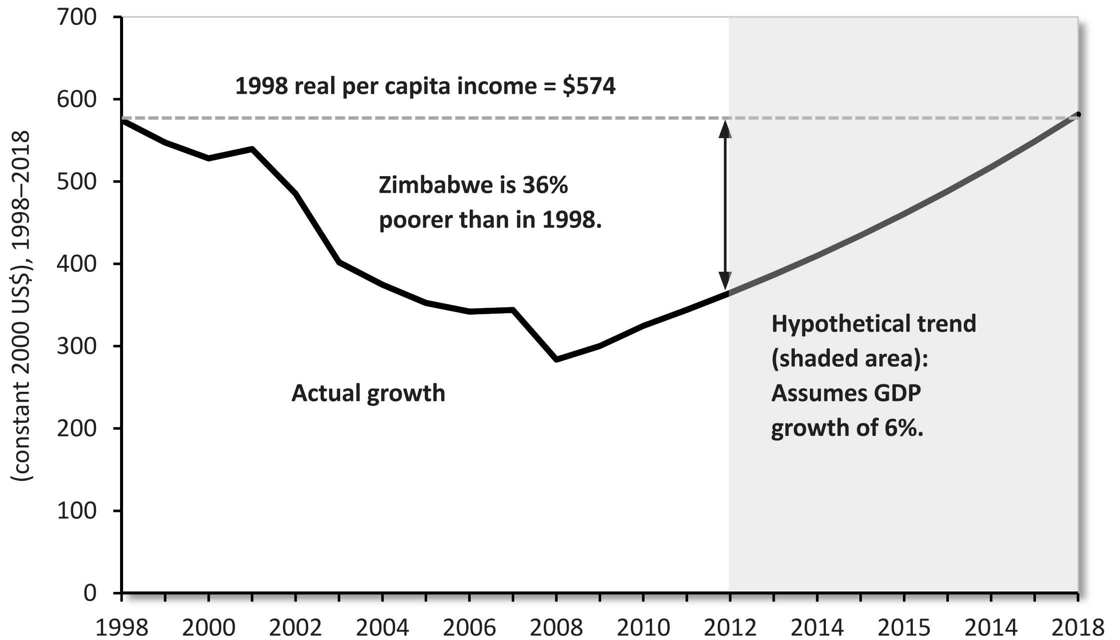
Throughout the first decade of the 21st century, Zimbabwe became "Exhibit A" on how to wreck a national economy. The Mugabe government seized thousands of large-scale commercial farms without compensating the landholders who held the property titles. As a result, there was a cascading set of economic failures, despite the agricultural sector commanding only 15 percent of the economy. Property titles for the farms became worthless, and hundreds of banks holding the deeds went out of business because mortgage payments were no longer being made. Hundreds of retail and commercial businesses dependent upon the farming sector also failed, and government tax revenue rapidly shrank as a result, creating enormous budget deficits. The government filled the gap by printing money, resulting in hyperinflation.[12] Johns Hopkins University economist Steve Hanke calculated that, by November 2008, Zimbabwe's annual inflation was the second highest in history, at 79.6 *sextillion* percent. To put that in perspective, Hanke calculated that prices were doubling every 24.7 hours.[13] After dollarization in early January 2009, inflation immediately fell to −2.3 percent by the end of the month and stabilized thereafter.[14]

The land seizures symbolized an overall breakdown in rule of law. Foreign investors fled and spooked tourists changed travel plans, creating even more of a downward economic spiral. The country formerly known as the breadbasket of Africa (which had exported its agricultural surplus) was now dependent upon food aid from the outside world, as the new farmers often had little knowledge of farming. To make matters worse, the farms' assets, such as its tractors, buildings, and irrigation equipment, were often stripped and sold by the new owners, who pocketed the cash.[15] By 2005, the loss of the country's wealth from the land seizures alone—at $5.3 billion—was calculated to be more than all the foreign aid Zimbabwe had received since its independence in 1980.[16]

Today, high GDP growth rates are welcome news for Zimbabwe. But the recent growth should be put into context. Ten years of economic contraction crushed Zimbabwe's economy, making it 36 percent poorer than it was in 1998 (see Figure 3). The sobering reality is that if current GDP growth continues at a fairly optimistic 6 percent, it will not be until 2018 that Zimbabwe finally reaches the former peak it hit in 1998. In

Ten years of economic contraction crushed Zimbabwe's economy, making it 36 percent poorer than it was in 1998.

Figure 3
Zimbabwe: Actual and Hypothesized per Capita GDP



Source: Based on data from World Bank Development Indicators, in constant 2000 dollars. Dollar figures for GDP are converted from domestic currencies using 2000 official exchange rates.

other words, the net effect of 20 years will have been a virtual economic standstill. The numbers do not tell the whole story though, because most people would have preferred zero economic growth to the rapid economic collapse that led to the exodus of hundreds of thousands of educated people.

How Foreign Aid Finances Zimbabwe's Government Deficits

Zimbabwe spends 47 percent of its government expenditures on its government wage bill.

Since dollarization stabilized the economy, Zimbabwe can now collect taxes far more efficiently than it could with hyperinflation, which had made accounting nearly impossible for anyone in business or government. Hyperinflation ended by the end of 2008 and a paltry $133 million in taxes was collected that year, but by 2011 tax revenue had jumped to $2.6 billion, according to the IMF (see Table 2).[17] There were pressing needs for infrastructure improvements in roads, bridges, schools, and hospitals, and government wages needed adjustment because of the previous decade's hyperinflation. But despite the more than 1,800 percent rise in tax collections over those three years, government expenditures have risen faster.

As a result, deficits climbed from $124 million in 2008 to $583 million in 2011. In relative terms, deficits now have more than doubled as a percentage of nominal GDP, from 2.9 percent in 2008 to 6.5 percent in 2011 (see Table 2). Most of this has come from the alarming rise in spending on government workers: Zimbabwe now spends 47 percent of its government expenditures on its government wage bill. The IMF noted that a recent public payroll audit identified 38,000 staff positions with significant irregularities, including possibly 14,000 ghost workers.[18] Tendai Biti, Zimbabwe's minister of finance, noted that the country's civil ser-

vants represent only 1.78 percent of Zimbabwe's population of 14 million, yet got the lion's share of the government's 2011 budget. The implication of this, he noted, was "unsustainable" spending.[19]

This raises a question: Where does the money come from to finance this profligate deficit spending? Dollarization should have forced the government toward fiscal discipline, as it took away the government's ability cover its deficits by printing money. In addition, there is certainly no market appetite for Zimbabwean government bonds to finance government deficits. As a result, the government should have moved in the direction of raising the confidence of foreign investors through improving World Bank governance and "Doing Business" indicators (seen earlier in Table 1 and Figure 2). But dollarization failed to discipline the government's deficit spending.

One reason for this failure is that the IMF and the Chinese government have given Zimbabwe hundreds of millions of dollars in grants and loans in recent years. As a result of the worldwide financial crisis, the IMF gave the Zimbabwean government a one-time $500 million hardship grant in 2008, issued in special drawing rights (SDRs). This available cash has given the government more leeway for overspending. Perhaps shrewdly, Zimbabwe used $140 million of that money to repay outstanding obligations to the IMF. Aside from clearing its own books, the IMF is not keen on releasing the SDRs to pay off other creditors, such as the World Bank (where Zimbabwe owes more than $1 billion), rather it has encouraged Zimbabwe to spend the money internally on projects such as power stations, railways, and agricultural inputs.[20]

Yet in searching for ways to pay for its deficit spending, the Zimbabwean government is finding it increasingly difficult to borrow from the outside world. The government has been in default on most of its external debt, which in 2011 was estimated to be around 10 billion U.S. dollars, or 108 percent of Zimbabwe's nominal GDP (see Table 2). Given its status, it is not currently eligible for new loans from the World Bank or the IMF. This debt stems primarily from loans made in the 1980s and 1990s by private lenders such as banks; foreign governments, including France, Germany, and the United Kingdom; and multilateral institutions including the World Bank, African Development Bank, and (until recently) the IMF.[21] In 2009, by far the largest multilateral creditor was the World Bank ($1.3 billion in loans outstanding), followed by the African Development Bank ($660 million in loans outstanding).[22]

However, the Chinese government has continued to advance loans. In June 2012, Zimbabwe defaulted on a $200 million Chinese loan used to procure farming equipment. Nevertheless, following the expected payment of interest on a 1997 loan for a steel company, Zimbabwe will be eligible for another $145 million loan from China's Export Import Bank (EXIM).[23]

To obtain even more loans, Zimbabwe is now pledging its natural and state resources as collateral. In a 2012 contract, all future revenue from Harare and Victoria Falls international airports were offered to the Chinese as security for a $381 million loan to upgrade the country's infrastructure. Zimbabwe's rich diamond fields have also been pledged as collateral for other loans from the Chinese.[24]

Gideon Gono, Zimbabwe's Federal Reserve governor, noted in a 2012 government report that its default status in the Western world prevents Zimbabwe from taking on even more debt, saying, "The continued accumulation of external payment arrears has seriously undermined the country's creditworthiness, and severely compromised the country's ability to secure new financing from both bilateral and multilateral sources." His report claims that as of 2011 there is more than $8 billion in external debt (which is $1.6 billion less than the IMF statistics, as shown in Table 2). To remedy the situation, he calls for a combination of new loans to pay off old ones, debt relief, and debt write-downs.[25]

The IMF and the Chinese government have given Zimbabwe hundreds of millions of dollars in grants and loans in recent years.

Table 2
Zimbabwe: Changes in Revenue, Expenditures, and Grants, 2008–2011 (US$ millions)

	Year			
Category	**2008**	**2009**	**2010**	**2011**
Total revenue & grants ($)	133.0	975.0	2,199.0	2,601.0
Total expenditures ($)	257.0	1,145.0	2,402.0	3,184.0
Wages ($)	52.0	419.0	784.0	1,020.0
Percent of total expenditures (%)	25.4	57.7	48.5	47.1
Budget balance ($)	−124.0	−170.0	−203.0	−583.0
Percent of nominal GDP (%)	2.9	2.9	2.7	6.5
External debt ($)	6,355.0	7,596.0	8,823.0	9,624.0
Off-budget grants ($)	0.0	351.0	630.0	770.0
Percent of government revenue (%)	0.0	36.0	28.6	29.6
Percent of nominal GDP (%)	0.0	6.0	8.4	8.6
GDP (nominal $)	4,330.0	5,836.0	7,474.0	8,916.0
GDP (constant 2000 US$)	3,490.0	3,699.0	4,032.0	4,407.0

Source: Based on International Monetary Fund, "Zimbabwe: 2011 Article IV Consultation" (IMF Country Report No. 11/135), Tables 1 and 3, pp. 27 and 29. GDP (constant 2000 US$) is from the World Bank's online World Development Indicators.
Note: The dollar figure for off-budget grants for 2011 was taken from the IMF report on page 14.

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Yet there is little hope of ever paying any of these loans back because the external debt is climbing ever faster. Zimbabwe continues to pay around $100 million U.S. dollars a year in external debt service, which is about 1 percent of 2011 nominal GDP.[26] Yet between 2008 and 2011, the debt increased by another $3.3 billion because of interest and more borrowing (see Table 2). In other words, for every $1 Zimbabwe repaid during those years, its debts climbed by another $11.[27]

Unlike richer countries, which can sell bonds to attempt to restructure their debt, Zimbabwe only has its natural and physical assets left. But even if Zimbabwe sold all of its mineral rights to the future receipts of diamonds, gold, and platinum, the IMF estimates the present discounted value still wouldn't be enough to pay off all it owes. Thus it is labeled as a country in "debt distress." Somewhat incredibly, with all its natural assets, the IMF states that Zimbabwe—the country—has a negative net worth.[28]

Artificial Economic Growth and Off-Budget Aid

Like an athlete who relies on steroids to build muscle mass versus another who comes by his strength through disciplined training, all growth is not the same. As we have seen, Zimbabwe's economic growth now largely relies on a rapidly growing public sector that is fed by enormous injections of funds from the IMF and new loans from the Chinese government.

Growth in Government vs. Private Spending

Table 3 shows another interesting trend: the dramatic nominal changes in govern-

ment spending relative to the private sector. In 2008–09, Zimbabwe's government sector grew 345.5 percent, while the private sector grew just 12.8 percent. The following year, the government more than doubled in size again, while the private sector grew just 8.1 percent larger. By 2010–11, the government sector increased by yet another third, accompanied by 13 percent growth in the private sector.

As is apparent in Table 4, between 2008 and 2011 roughly two-thirds (64.5 percent) of Zimbabwe's nominal GDP growth was due to a public sector that spends 12 times more than it did five years ago. GDP growth measures changes in private plus government expenditures, which explains how Zimbabwe's economy has grown so fast despite having such a poor economic environment. (Although the table's numbers are not adjusted for inflation, they are still helpful for understanding the relative contribution of each sector toward the economy's growth.)[29]

Zimbabwe's economy is growing increasingly cruder.

Off-budget Expenditures and Growth

Another development involving international aid flows has also provided a temporary boost to Zimbabwe's economy. Beginning in 2009, the international aid community bypassed the Zimbabwean government and

Table 3
Levels and Growth in Government versus Private Sector in Zimbabwe, 2008–2011

	Levels (current US$ millions)				Annual Growth (%)		
Source of Spending	**2008**	**2009**	**2010**	**2011**	**2008–09**	**2009–10**	**2010–11**
Government (G)	257	1,145	2,402	3,184	345.5	109.8	32.6
Private sector (P)	4,159	4,691	5,072	5,732	12.8	8.1	13.0
Nominal GDP = G + P	4,416	5,836	7,474	8,916	32.2	28.1	19.3

Source: Calculations used data from IMF 2011 Article IV consultation, (11/135), Table 1, p. 27. The calculations for G and P were made as follows. The standard definition of GDP = C + I + G + NX where C = private spending by households, I = business spending on capital and changes in inventories, G = government spending, and NX = export spending minus import spending. I set the private sector as P = C + I + NX. Data on government spending (G) and nominal GDP was available from the IMF, so therefore P = GDP − G.
Note: There is no data for real government spending, thus the comparisons in this table are in nominal terms.

Table 4
Percent Contribution of Government vs. Private Sector to Zimbabwe's GDP Growth, 2008–2011

	Percent contribution to current (nominal) GDP growth (%)			
Source of Spending	**2008–09**	**2009–10**	**2010–11**	**Average**
Government (G)	62.5	76.7	54.2	64.5
Private sector (P)	37.5	23.3	45.8	35.5
Nominal GDP = G + P	100.0	100.0	100.0	100.0

Source: Author's calculations, using data from International Monetary Fund, "Zimbabwe: 2011 Article IV Consultation" (IMF Country Report No. 11/135), Table 1 and Table 3. For example, to find the percent contribution of G to 2008–2009 GDP growth, I used the following formula: (G(2009) − G(2008))/((GDP(2009) − GDP(2008)) * 100, which gave the relative contribution of government spending changes to GDP changes. The private sector for 2008–09 was handled similarly: (P(2009) − P(2008))/(GDP(2009) − GDP(2008)) * 100. See Table 3 above for a definition of P, the private sector.

Table 5
Zimbabwe: Sources of off-budget grants, 2011

Bilateral partners	2011 projected expenditure (US$ millions)	Percentage share (%)
Australia	50.0	9.31
Canada	15.0	2.79
Denmark	18.1	3.37
European Union	85.9	16.00
Finland	8.2	1.53
France	TBA	TBA
Germany	38.9	7.25
Ireland	6.0	1.12
Japan	15.8	2.94
Netherlands	22.2	4.14
Norway	13.6	2.53
Sweden	32.3	6.02
Switzerland	11.8	2.20
UKAID	85.9	16.00
USAID	133.1	24.80
Total	**536.8**	**100.00**

Source: 2012 National Budget, Zimbabwe Treasury, p. 61, http://www.zimtreasury.org/downloads/930.pdf.
Note: An additional $81.2 million is being promised by seven other multilateral donors, including the ILO, FAO, UNDP, UNFPA, UNICEF, WHO, UNESCO, and World Bank. The World Bank is the largest contributor, at 9.8 million disbursed in 2011 through September.

Zimbabwe's growth is likely to be short-lived without reforms in government and a move to a freer economy.

sent aid directly into the economy through non-governmental organizations (NGOs).[30] As a result, these aid expenditures are now counted in the government accounting ledgers as "off-budget expenditures," as shown in Table 5.

On the face of it, this money does lots of good. For example, USAID distributes tens of millions of dollars for food, training of conservation farming, use of drought-resistant crops, improvement of livestock health, and establishment of goat production, for example.[31] Yet it is important to remember that in the era of relatively secure property rights prior to 2000, Zimbabwe rarely had a need for food aid; in fact, its commercial farms generated food surpluses that were exported to neighboring countries. Those secure property rights also gave incentives for farmers possessing titles to invest in irrigation equipment and manmade dams, conservation practices, and drought-resistant crops, all without the help of the international community.[32] Today, the aid does "good" in the short run, but it does damage in the long run by orienting the communal farmer to dependency on outside support.

This approach to aid also makes the incorrect presumption that most people want to be farmers, when in fact secure property titles would allow the land to be sold by those who are better suited to other profes-

sions, and thus vastly diversify the economy. Thus a die is cast that essentially constrains poor Zimbabweans to a slightly improved life of farming, but makes them ever more dependent on the help of hundreds of millions of dollars in outside aid each year. Even worse, a person without a land title has little ambition to plan and invest over the long term, since there is no way to capture the accrued value in the land by selling it. This creates an ongoing "need" for aid agencies to provide food, dams, training, and the like, instead of the economy generating a self-sustaining system.

When all the aid is added together, it is enormous in scale—jumping from $350 million in 2009 to an estimated $770 million in 2011. This is equal to 30 percent of all government spending in 2011, and 8.6 percent of GDP, as shown in Table 2. (If all foreign aid were included as part of 2011 government spending, then total government spending would be 41 percent of GDP, versus 36 percent.) These amounts are so large that the economy would likely go into recession if the grant funding stopped.

In a 2011 staff report on Zimbabwe, the IMF presents some contradictions in its own reporting of the total aid. In the report's Table 3, it indicates $540 million in 2011 off-budget grants, yet in the text it states that 2011 off-budget expenditures are actually projected to be $770 million, which is an increase of 22 percent from the year before.[33]

Zimbabwe's official 2012 budget statement put out by the country's treasury department outlines the sources of these off-budget funds, dividing them between two categories: bilateral and multilateral funding. Bilateral (country-to-country) funding made up the largest fraction, with nearly $537 million slated to come from 15 of the world's wealthiest countries. An additional $81 million comes from multilateral donor organizations, which include the World Bank,[34] United Nations Children's Fund (UNICEF), United Nations Population Fund (UNFPA), and the World Health Organization (WHO). Adding $536.8 and $81.2 million brings the total to $618.0 million in total off-budget foreign aid.[35] That total falls between the two IMF staff report numbers of $571 million (in the report's Table 3) and $770 million (in the text). But it doesn't include France's contribution, which was to be announced. That may account for a good part of the missing $118 million.

Table 5 gives a sense of where the off-budget grants are coming from. The United States is the largest donor (through USAID), followed by the UK and the European Union. Australia is a surprisingly large donor, at $50 million in 2011, larger than Germany at $38.9 million (although presumably Germany gives through the European Union as well). The Nordic countries—Denmark, Finland, Netherlands, Norway, and Sweden—together give $94.4 million, or 17.5 percent of the total—a remarkably large figure given the relatively small size of their economies.

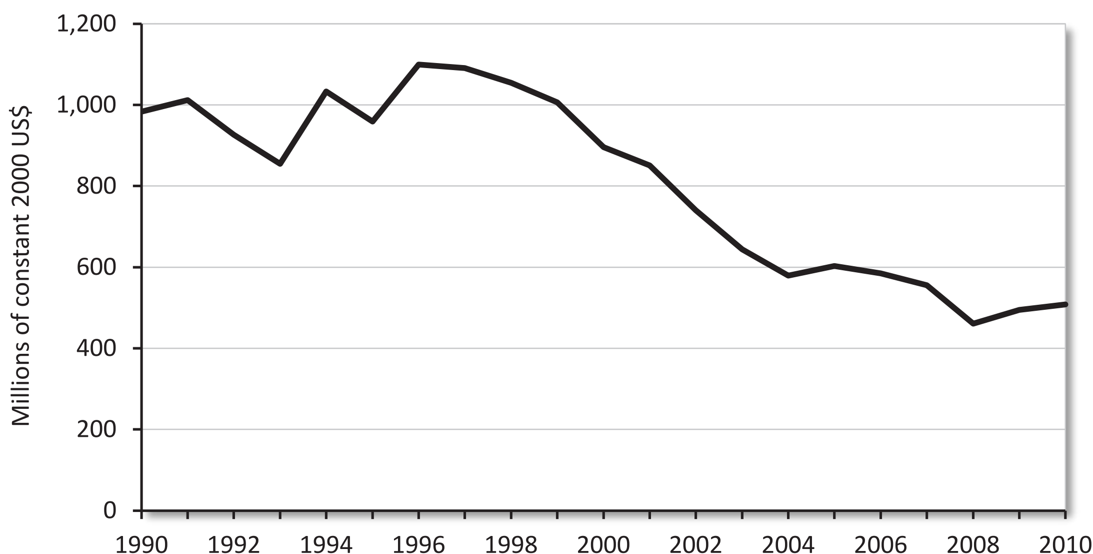
Foreign aid has increased substantially in recent years, apparently doubling between 2009 and 2011. If that rate of increase were to continue, within four years off-budget funding would exceed government revenue. Clearly this is unsustainable. When this growth in aid tapers off, which it inevitably will, Zimbabwe's economic growth will plateau or decline.

From Farming and Manufacturing to Mining: Long-term Consequences of a Cruder Economy

Although vastly smaller now than before the farmland seizures, Zimbabwe's agricultural sector still supports a broad and complex set of industries within the country. Dozens of different crops create demands for domestic manufacturing and distribution companies. The farms often purchase inputs locally and then sell their crops to Zimbabwe manufacturing companies. For example, in the case of raw cotton, Zimbabwe's remaining commercial farmers can

A person without a land title has little ambition to plan and invest over the long term.

Figure 4
Zimbabwe: Manufacturing, Value Added, 1990–2010



Source: World Development Indicators database, The World Bank.

buy fertilizer from a local company such as ZFC Ltd., which imports more than 150 different agricultural chemicals. The farmers can then sell their cotton to, say, David Whitehead Textiles Ltd., which is a large Zimbabwean textile manufacturing company.

Historically, the agricultural and manufacturing sectors have been economically intertwined, so it is no surprise that the value-added from manufacturing has been on the decline since the past decade of farm seizures. In 2001, about 60 percent of Zimbabwe's manufacturing firms either depended upon the country's agricultural outputs or supplied inputs for the farming sector, according to an OECD report.[36] As a result of the destruction of the commercial farming sector, hundreds of related businesses have since closed.[37] The value-added from manufacturing has dropped by half since the late 1990s—from $1.1 billion to $0.5 billion today, in year 2000 dollars (see Figure 4).

The value-added from manufacturing has dropped by half since the late 1990s.

According to data obtained from the Massachusetts Institute of Technology's *Atlas of Economic Complexity*, Zimbabwe now exports far fewer types of goods than it did in 1995, when there were 759 products shipped out of the country. In 2010 (the latest year for which data are available), the number of products had declined to 604. Along with the steady decline in manufacturing there is now a more top-heavy export distribution. For example, in 1995, the top 10 exports accounted for 55 percent of all the foreign exchange. In 2010, the top 10 exports accounted for 81 percent.[38]

A New Top Export and a Mysterious Source of Revenue

Zimbabwe's top export in 2010 was "Unused postage, revenue, or similar stamps of current or new issue." MIT's data show the meteoric rise of this category: export sales in this category have rapidly climbed in value from just $200,000 in 2003 to an astonishing $435 million in 2009, as shown in Figure 5. The source of this revenue used to be easy to track—for example, in 1997 Zimbabwe exported $726,000 worth of unused postage stamps to Great Britain, which accounted for 100 percent of its sales. Presumably this was for expatriates of Zimbabwe and stamp collectors.

By 2010 (latest year available), revenue from sales of unused postage jumped to the top export category, at $559 million in sales. This exceeded the export market for nickel ($447 million), tobacco ($370 million), diamonds ($354 million), and gold ($287 million), which are large economic sectors.

Who bought more than a half-billion dollars' worth of stamps and government-issued certificates? That remains an unknown, at least according to the Massachusetts Institute of Technology database. Great Britain bought just $500,000 worth, and Malawi, China, and Uganda purchased just under $10,000 worth. That accounts for less than 0.1 percent of all the sales. No other countries are listed in the database. Some observers have hypothesized that this is a cover for gold or diamond sales, but there is no official explanation for who the buyers might be, or why the sales would be disguised—if, in fact, that's what's occurring.

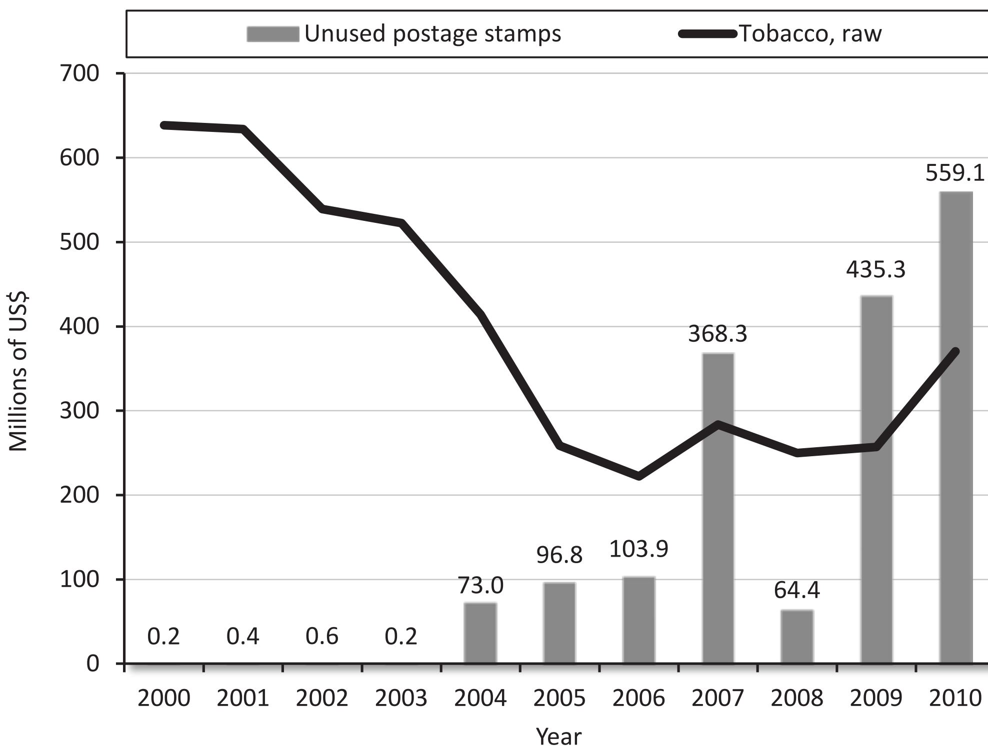
What is clear is that Zimbabwe's dollar value from exporting unused postage and stamps is now the third largest in the world, according to MIT's data, accounting for 14 percent of the entire world trade in this category. The cash flow from this category in 2010 was nearly the size of Zimbabwe's government deficit in the same year. If Zimbabwe has invented a new way to create value out of printing paper, then this is a clever way to facilitate massive increases in government spending. What is clear is that Zimbabwe's government appears to have an uncanny ability to raise cash through external sources of funding, some known and others unknown.

Zimbabwe became "Exhibit A" on how to wreck a national economy.

Mining and the Decline in Economic Complexity

Zimbabwe's mining output is export-

Figure 5
Zimbabwe: Changes in Top Exports over Time, 2000–2010



Source: MIT Atlas of Economic Complexity.
Note: Zimbabwe adopted the U.S. dollar as its currency in early 2009, after enduring hyperinflation throughout the mid-late 2000s. Graph by Craig J. Richardson.

Table 6
Mining in Zimbabwe, 2009–2011

	2009	2010	2011
Mining Exports (US$ millions)	670	1,600	2,450
Growth (%)	n/a	138.8	53.1
Total Exports (US$ millions)	1,798	3,608	4,897
Mining share of total exports (%)	37.3	44.3	50.0

Sources: Rebecca Moyo, "Mining Sector's Contribution to Government Revenues Declines," *The Zimbabwean*, May 20, 2012, http://www.thezimbabwean.co.uk/business/mining/58342/mining-sectors-contribution-to-government.html. The Zimbabwe Chamber of Mines provided 2009 data for mining exports. Overall export data comes from the World Bank's World Development Indicators.

By November 2008, Zimbabwe's annual inflation was the second highest in history.

ed in its raw state, and thus does not support related manufacturing industries to nearly the same extent as agriculture once did. For example, two South African mining companies—Anglo American Platinum and Impala Platinum—currently send raw platinum from their Zimbabwean mines to South African refineries. The lack of domestic refining and associated manufacturing is not necessarily the mining companies' fault, given the Zimbabwean government's heavy-handed efforts to promote expansion of the mining sector's refining capabilities. For example, the government is considering a ban on exports of raw platinum, following last year's ban on exports of raw chrome. This is supposed to promote local smelting. As the deputy mines minister, Gift Chimanikire, has explained: "They need to start investing in a refinery in Zimbabwe. We need value-addition for our minerals here; we cannot keep exporting jobs."[39]

But investing in an expensive smelter in a country with one of the world's worst business environments is a daunting proposition. This policy of export bans hurts small-scale chrome miners the most, since they are forced to sell their raw minerals to the sole Zimbabwe refinery, ZIMASCO, which typically offers them prices well below the market rate and only accepts certain varieties of minerals. So, ironically, a policy meant to help the country ends up hurting local producers the most, since foreign refineries can source their raw minerals from other countries. A recent report estimated the lost opportunities from the export bans on chrome included forgone revenue at $4 million and more than 2,000 jobs.[40]

Even so, Zimbabwe produced 154,336 tons of high-carbon ferrochrome worth $135 million in 2010, more than double the 72,223 tons in 2009. Platinum production rose 26 percent during the same time, while gold production jumped by 96 percent.[41] Since 2009, world prices for these three minerals have risen between 70 and 85 percent, also boosting industry revenues. The industry now accounts for 50 percent of all of Zimbabwe's foreign-exchange revenue (see Table 6).

The South Africans and Chinese have shown particular interest in securing flows of these minerals to serve as inputs for their manufacturing sectors. As Table 6 shows, the dollar value of Zimbabwe's mining exports more than tripled between 2009 and 2011.[42] Although the economywide ripple effects in the manufacturing sector are far fewer than in agriculture, there is no doubt that a strong mining sector helps the economy because some of the income translates to community development, including new infrastructure, roads, housing, schools, and health clinics.

But a serious downside of moving to a basket of exports that is based on raw commodities is that it yields an income flow that

is destined to be both volatile and unsustainable—essentially moving toward an all-eggs-in-one-basket strategy. In contrast, in a complex manufacturing-based economy, each element in the supply chain adds value through a combination of labor, capital, and materials. As a result, the final good's price is more able to absorb shocks from changes in external world commodity prices because it is also composed of dozens, if not hundreds, of different domestic input prices that rarely act in concert.

As an example, a $3 box of corn flakes has only 8 cents' worth of corn in it, so fluctuating corn prices rarely affect U.S. producers (and consumers) of corn flakes.[43] The other $2.92 goes to paying for transportation, processing, packaging, marketing, and so on. This contrasts with Zimbabwe's economy, where subsistence farmers make up a large fraction of the population and rely on a few crops' prices to both earn money and feed their families. They are thus highly exposed to variations in world commodity prices. The point here is that as Zimbabwe's economic output gets cruder, the volatility of living conditions can only increase, and this makes the country far more susceptible to economic crises when commodity prices fall.

In addition, the mineral sector's recent success may be short-lived. Recent actions by the government appear to be an attempt to kill the goose that lays the golden eggs, echoing the seizure of the large-scale commercial farms. Whereas other countries, such as Botswana, engage in lengthy negotiations over the amount of revenue shared between government and industry, Zimbabwe makes sudden and shocking changes in fees, which adds to the difficulty of building industry trust—a necessary ingredient for capital investment. Table 7 shows the dramatic changes in licensing fees from 2011 to 2012, which range from an increase of 400 percent to an increase of 833,233 percent.

Conclusion

Zimbabwe's rapid GDP growth and poor business environment appear to be a paradox. In fact, the growth is the result of unsus-

As Zimbabwe's economic output gets cruder, the volatility of living conditions can only increase.

Table 7
Changes in One-time Mining Fees in Zimbabwe: 2011 vs. 2012

	2011 (US$)	2012 (US$)	Percent change (%)
Platinum			
License fee	150	500,000	333,233
Registration fee	300	2,500,000	833,233
Diamonds			
Registration	1,000,000	5,000,000	400
License to cut and polish	20,000	100,000	400
Prospector license	100	5,000	4,900
Other resources*			
Application Fee	5,000	100,000	1,900
Ordinary prospecting licence	100	500	400

Source: "After Diamonds, Zimbabwe to Raise Platinum Mining Fees," January 30, 2012, *Bullion Street*, http://www.bullionstreet.com/news/after-diamonds-zimbabwe-to-raise-platinum-mining-fees/933.
*Includes coal, mineral oil, natural gas, and nuclear energy mineral resources.

tainable economic factors that have created an artificially high growth rate, including a 12-fold increase in government expenditures since 2008, with government deficits fed by enormous inflows of foreign grants and loans from the IMF, China, and Western countries (both on- and off-budget). Nearly 9 percent of its GDP comes from off-budget grants from the outside world, and those grants have rapidly increased over the past several years. Another factor is the mysterious 2010 sale of more than a half-billion dollars' worth of unused government-issued stamps (to buyers unknown). There has also been a rapid escalation of sales of raw minerals that have had the good fortune to benefit from higher commodity prices. Yet the country's increasing reliance on exporting raw commodities, rather than investing in manufacturing, puts it in a vulnerable position subject to volatile world prices beyond its control.

Land seizures symbolized an overall breakdown in rule of law.

Dollarization has played an important role in stabilizing the economy, and has yielded improvements in local markets and the tourism sector. But the artificial financial injections from the outside world have propped up the economy and enabled the government to move to lower governance and economic freedom ratings while damaging its long-term growth prospects.

Another concern for foreign investors are the new laws that demand 51 percent indigenous ownership of foreign-owned banks, mining companies, and insurance companies. It is not clear how a transfer of ownership in these institutions could occur, since it would require the Zimbabwean government or indigenous investors to come up with millions of dollars, in many cases, to secure ownership rights through the purchase of company stock. That, of course, assumes the rule of law is followed. Between 1980 and 2000, the Mugabe-led government seized commercial farms despite free-and-clear land titles issued after their purchase on the open market. The resulting breach of trust opened serious and ongoing questions about future transfers of wealth and how they will be accomplished in other sectors of the economy.

Thus, until Zimbabwe's government begins fixing its internal problems of extraordinarily poor governance, insecure property rights, and dependence upon foreign aid and raw exports, its current high GDP growth rates are not a reliable indicator of its long-term prospects. The case reminds us that correlations between economic freedom and economic growth are not always tidy, especially over a short period of time. But the advantage of studying one of the world's least free economies is that it throws into sharp relief how economies can grow despite themselves, at least in the short run. It helps us further understand how all GDP growth is not the same. This is especially true when analyzing other countries in sub-Saharan Africa, many of which are also growing rapidly but making more headway in constructing responsible governments and freer markets. Long-term investments, which bring rising standards of living to most citizens, must be accompanied by an economic environment characterized by risk-taking, trust in secure rule of law, and strong property rights.

Yet there is some cause for optimism. Economic development is not far beyond Zimbabwe's grasp, as it has the shell of a constitutional framework, a government originally organized along democratic structures, and a previous record of respecting property rights and rule of law. Although it declared itself a proponent of socialism in 1980, Zimbabwe's federal government evolved by 1987 toward a system resembling the U.S. government structure. Many Zimbabweans are familiar with due process, a free press, free elections, and a working judicial system—if they are old enough to remember the non-tyrannical early years of the Mugabe government, particularly during the 1980s. There is a legislative process with a House and a Senate, which follows with a bill needing the president's signature or veto. The government also receives funding through income and sales taxes. The Zimbabwean constitution includes a Declaration of Rights (simi-

lar to the U.S. Bill of Rights), and a process for amending the constitution.[44]

For the most part, the rules were followed until 2000, the first year of the commercial farmland expropriations. From that time forward, President Mugabe ignored judges and referendums when it suited him. But presidential elections in 2013 may provide an opportunity to put the country's guiding rules into better practice. If Zimbabwe seizes that opportunity and puts secure rule of law, good governance, and property rights at the forefront, it will have far more upside potential in the long run, and far more of its population will benefit.

Notes

The author thanks Aparna Shivram and Veaceslav Driglov for their excellent research assistance.

1. "Zimbabwe," CIA World Factbook, https://www.cia.gov/library/publications/the-world-factbook/geos/zi.html.

2. See page v in James Gwartney, Joshua Hall, and Robert Lawson, *The Economic Freedom of the World: 2012 Annual Report* (Vancouver: Fraser Institute, 2012), http://www.freetheworld.com/2012/EFW2012-complete.pdf. Zimbabwe was ranked last in 2009 but an improving trade environment lifted it to second from the bottom in the latest report.

3. Ibid., p. 171.

4. Joseph Noko,"Dollarization: The Case of Zimbabwe," *Cato Journal* 31, no. 2 (Spring/Summer 2011): 339–65.

5. According to *Economic Freedom of the World: 2012 Annual Report*.

6. See Jean-Pierre Chauffour, "What Matters For Development—Freedom or Entitlement?" in James Gwartney, Robert Lawson, and Joshua Hall, *Economic Freedom of the World: 2011 Annual Report* (Vancouver: The Fraser Institute, 2011), p. 170. Chauffour gives a good overview of the economic growth literature and concludes that a "growing consensus" of economists believe that institutions (which are in themselves responsible for economic freedom) and geography have more to with the ultimate causes of economic growth than the traditional Solow growth theory, which focuses on assumed exogenous capital, labor, and technology differences. (See pp. 167–68.)

7. "The Lion Kings?" *The Economist*, January 6, 2011, http://www.economist.com/node/17853324.

8. Chad and Angola are the only two countries to see a drop in the average governance indicators from 1996: Chad dropped from 22.0 to 4.5, and Angola fell from 10.2 to 8.4. Nigeria saw a little positive change. These three countries also have high dependence upon oil export revenue, which makes up 62% of all export revenue for Angola, 44% for Chad, and 38% for Nigeria. (Rwanda, Mozambique, and Ethiopia have no exports of oil.) This is another insight into the so-called "oil curse" where countries have little incentive to improve when they can easily sell a raw commodity. Still, neither Chad nor Angola's governance indicators fell nearly as fast and as far as Zimbabwe.

9. The data for the table comes from the World Bank's Doing Business website, which rates countries on a variety of factors having to do with starting up a business, and the relative efficiency of governments in registering property, getting electricity, building permits, and the like. See Doing Business at http://www.doingbusiness.org/.

10. See Hernando de Soto, *Mystery of Capital* (New York: Basic Books, 2000), for a longer explanation of how formal business representation leads to economic growth.

11. My research emphasized property rights as the primary culprit, in contrast to reports by the IMF and World Bank that laid blame on a multiplicity of factors, including droughts (which I dispelled using official rainfall data). See Craig Richardson, "The Loss of Property Rights and the Collapse of Zimbabwe," *Cato Journal* 25, no. 3 (Fall 2005): 541–53.

12. Ibid.

13. Steve Hanke,"World Hyperinflations," Cato Institute Working Paper (August 15, 2012). See also S. H. Hanke and A. K. F. Kwok, "On the Measurement of Zimbabwe's Hyperinflation," *Cato Journal* 29, no. 2 (Spring/Summer 2009): 353–64.

14. Noko,"Dollarization."

15. Craig Richardson, *The Collapse of Zimbabwe in the Wake of the 2000–2003 Land Reforms* (Lewiston, NY: Edwin Mellen Press, 2005), p. 77.

16. Ibid., p. 83.

17. International Monetary Fund, "Zimbabwe: 2011 Article IV Consultation" (IMF Country Report No. 11/135), pp. 27 and 29, http://www.imf.

org/external/pubs/ft/scr/2011/cr11135.pdf.

18. Ibid., p. 15.

19. Zimbabwe Treasury, "The 2012 National Budget: Sustaining Efficient Inclusive Growth with Jobs," presented to the Parliament of Zimbabwe Minister of Finance, The Hon. T. Biti, M. P. (2012), p. 71. Links to Zimbabwe's budget policy statements can be found at http://www.zimtreasury.gov.zw/index.php?option=com_docman&task=cat_view&gid=35&Itemid=71.

20. *Voice of America*,"Zimbabwe to Use Special Drawing Rights Facility to Pay Off IMF Debt," June 8, 2012, http://www.voanews.com/zimbabwe/news/Zimbabwe-Pays-Debt-With-Special-Drawing-Rights-127773273.html. In addition, the ministry of finance detailed how the IMF and World Bank regulate the withdrawals from the special drawing rights (SDR) account at the IMF, giving examples of projects that have benefited from the funds, including airports, bridges, and a power company. See "Press Statement by the Ministry of Finance on the Utilisation of Zimbabwe's IMF Special Drawing Rights," August 4, 2011, http://208.112.4.72/news-detail.cfm?News=910. In addition, the IMF noted: "Also, staff cautioned against selective debt servicing, as this may complicate arrears clearance and debt relief in future. Further depletion of the SDR holdings to fund expenditure, would worsen Zimbabwe's external vulnerability and debt situation, and could complicate the eventual arrears clearance process." See International Monetary Fund, "Zimbabwe: 2012 Article IV Consultation" (IMF Country Report No. 12/279), p. 22, http://www.imf.org/external/pubs/ft/scr/2012/cr12279.pdf.

21. Tim Jones, *Uncovering Zimbabwe's Debt: The Case for a Democratic Solution to the Unjust Debt Burden* (London: Jubilee Debt Campaign, 2011), p. 38, http://www.jubileedebtcampaign.org.uk/zimbabwereport.

22. Ibid.

23. "Zimbabwe Defaults on $200m Loan from China," *New Zimbabwe.com*, June 26, 2012, http://www.newzimbabwe.com/news-8340-Zimbabwe%20defaults%20on%20$200m%20China%20loan/news.aspx.

24. Paidamoyo Muzulu, "UNWTO: Zim Mortgages More Resources," *Zimbabwe Independent*, August 10, 2012, http://www.theindependent.co.zw/2012/08/10/unwto-zim-mortgages-more-natural-resources.

25. Gideon Gono, "Commentary on the Zimbabwe Accelerated Arrears Clearance, Debt and Development," Reserve Bank of Zimbabwe, May, 2012, p. 2, http://www.rbz.co.zw/pdfs/speeches/Governors%20Paper%20on%20ZAADDS%20May%202012.pdf.

26. Tim Jones, *Uncovering Zimbabwe's Debt*.

27. As shown in Table 3, between 2008 and 2011 the external debt increased by $3.269 billion. If Zimbabwe's government made payments of about $100 million a year, then it paid $300 million over those three years, for a ratio of $3,269 million/$300 million. This equals 11 new dollars in debt for every 1 dollar paid off.

28. This assumes current known mineral stocks and a discount rate of 17 percent to take into account the country's risk profile. The report admits this may substantially understate its true wealth because of other assets that are both known and unknown. See International Monetary Fund, "Zimbabwe: 2011 Article IV Consultation" (IMF Country Report No. 11/135), pp. 49–52, http://www.imf.org/external/pubs/ft/scr/2011/cr11135.pdf.

29. Reported inflation rates in Zimbabwe have not always been consistent, as Nicholas Krus at Johns Hopkins University pointed out in a recent memo to me. For example, the World Bank's Development Indicators database has an inflation rate for Zimbabwe based on a GDP deflator method that is far lower than other measures. Krus surmised it was likely due to a data input error. Krus notes that other sources, including the Economist Intelligence Unit and the International Finance Corporation, have inflation numbers (based on the GDP deflator) that are consistent with other measures of inflation, such as the CPI method.

30. International Monetary Fund, "Zimbabwe: 2011 Article IV Consultation," p. 14.

31. United States Agency for International Development, "USAID: Zimbabwe," http://transition.usaid.gov/zw/hum_assistance.html.

32. Craig Richardson, *The Collapse of Zimbabwe in the Wake of the 2000–2003 Land Reforms* (Lewiston, NY: Edwin Mellen Press, 2004), pp. 75–82.

33. Ibid., pp. 5 and 14. All text refers to the larger amount of off-budget grants, making that the more plausible one.

34. Although the World Bank does not directly loan the Zimbabwean government money because of Zimbabwe's outstanding debts, it still disburses money in the form of grants for particular projects. The difference is that that the World Bank (in theory) is supposed to have greater control over how these funds are spent.

35. Zimbabwe Treasury, "The 2012 National Budget: Sustaining Efficient Inclusive Growth with Jobs," p. 61, http://www.zimtreasury.org/downloads/930.pdf.

36. Cited in Richardson, *The Collapse of Zimbabwe in the Wake of the 2000–2003 Land Reforms*, p. 81.

37. Ibid.

38. Data used to make these calculations comes from MIT, "The Atlas of Economic Complexity," http://atlas.media.mit.edu/explore/tree_map/export/usa/all/show/2009/.

39. Nelson Banya, "Zimbabwe Says No Immediate Raw Platinum Export Ban," Reuters, December 28, 2011, http://af.reuters.com/article/investingNews/idAFJOE7BR03L20111228.

40. Roman Moyo,"Chrome Export Ban Costs US$4 Million," *New Zimbabwe.com*, July 10, 2012, http://www.newzimbabwe.com/business-8455-Chrome+export+ban+costs+US$4+million/business.aspx.

41. Ibid., citing economist John Robertson.

42. Brian Latham and Ainhoa Goyeneche, "Zimbabwe's Mining Output Doubles in 2010 as Nation Recovers From Recession," *Bloomberg*, April 7, 2011, http://www.bloomberg.com/news/2011-04-07/zimbabwe-s-mining-output-doubles-in-2010-as-nation-recovers-from-recession.html.

43. Candice Choi, "Impact of Corn Prices on Food? Not What You Think. A Look at How Rising Corn Prices Will Impact Prices at the Supermarket," *Associated Press*, August 1, 2012, http://finance.yahoo.com/news/impact-corn-prices-food-not-165339970.html.

44. Richardson, *The Collapse of Zimbabwe in the Wake of the 2000–2003 Land Reforms*, pp. 44–45.

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